



# STIC Search Report

## EIC 3700

STIC Database Tracking Number: 97319

TO: Mike Hayes  
Location: CP2 3D23  
Art Unit: 3763

Case Serial Number: 09/745751

From: Jeanne Horrigan  
Location: EIC 3700  
CP2-2C08  
Phone: 305-5934

[jeanne.horrigan@uspto.gov](mailto:jeanne.horrigan@uspto.gov)

### Search Notes

Attached are the search results for the method of performing an injection, including relevant prior art of inventor, and results of prior art searches in foreign/international patent databases, and prior art searches in medical and general sci/tech non-patent literature databases.

The results are organized into three sets: inventor, non-patent literature, and foreign and international patents.

Results appear after the database names and search strategy used for those results. I tagged only one item that I thought seemed most relevant, but I suggest that you review all of the results (especially because I had a hard time understanding the art).

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me (phone 305-5934 or email [jeanne.horrigan@uspto.gov](mailto:jeanne.horrigan@uspto.gov)) if you have any questions or need additional searching on this application.



# STIC Search Results Feedback Form

**EIC 3700**

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

John Sims, EIC 3700 Team Leader  
308-4836, CP2-2C08

## Voluntary Results Feedback Form

➤ I am an examiner in Workgroup:  Example: 3730

➤ Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature  
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

**Comments:**

Drop off or send completed forms to STIC/EIC3700 CP2 2C08



File 155:MEDLINE(R) 1966-2003/Jun W4  
File 5:Biosis Previews(R) 1969-2003/Jun W3  
File 73:EMBASE 1974-2003/Jun W4  
File 34:SciSearch(R) Cited Ref Sci 1990-2003/Jun W4  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
File 144:Pascal 1973-2003/Jun W2  
File 6:NTIS 1964-2003/Jun W4  
File 8:Ei Compendex(R) 1970-2003/Jun W3  
File 2:INSPEC 1969-2003/Jun W3  
File 99:Wilson Appl. Sci & Tech Abs 1983-2003/May  
File 65:Inside Conferences 1993-2003/Jun W4  
File 94:JICST-EPlus 1985-2003/Jun W4  
File 35:Dissertation Abs Online 1861-2003/May  
File 95:TEME-Technology & Management 1989-2003/Jun W2

Set	Items	Description
S1	29124	SYRINGE? ?
S2	246447	NEEDLE? ?
S3	60608	BIDIRECTION? OR BI()DIRECTION?
S4	1196795	DIRECTION?
S5	3967709	DEGREE OR DEGREES OR 180
S6	992294	ROTAT???? OR TWIST???? OR PIVOT????
S7	598869	TURN OR TURNS OR TURNED OR TURNING
S8	90861	REVOLV???? OR REVOLUTION? ? OR SWIVEL????
S9	4	S1 AND S2 AND S3
<b>S10</b>	<b>4</b>	<b>RD (unique items) [not relevant]</b>
S11	162	S6:S8 AND S1 AND S2
S12	9	S5 AND S11
S13	2	S4 AND S12
<b>S14</b>	<b>2</b>	<b>RD (unique items)</b>
S15	7	S12 NOT (S13 OR S9)
S16	7	RD (unique items)
S17	1	S16/2000:2003
<b>S18</b>	<b>6</b>	<b>S16 NOT S17</b>

14/7/2 (Item 1 from file: 73)

DIALOG(R)File 73:EMBASE

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03725964 EMBASE No: 1988175400

**Bipolar electrode with radially asymmetric electric field. A new principle of nerve localization in regional anesthesia and pain therapy**

Kubler N.; Theiss D.; Gaertner T.

Klinik für Anaesthesiologie der Johannes Gutenberg-Universität, Mainz  
Germany

Anaesthesist ( ANAESTHESIST ) (Germany) 1988, 37/7 (78-82)

CODEN: ANATA ISSN: 0003-2417

DOCUMENT TYPE: Journal

LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH

Electrostimulation is a common method of nerve localization. To improve the nerve-stimulating **needle**, we developed a new bipolar nerve-stimulating electrode with a more convenient extension of its electric field. Figure 1a shows a new nerve-stimulating **needle**; in Fig. 1b a longitudinal section is depicted. A hollow cannula is surrounded by an isolator that separates the internal electrode from the external electrode. The surface of the latter is also covered by an isolator. Two cables connect the electrodes to a nerve stimulator. **Syringes** and tubes can be connected to the **needle** by using the attached part. Figs. 2a and b show

top- and side views of the **needle** 's sharp end. Except for small parts of the internal and external electrode, both electrodes are covered by isolation. This arrangement leads to the radially asymmetric extension of the electric field. Studies with animal nerve-muscle preparations showed that the density of the electric field is higher, and thus electrostimulation can be carried out with up to 75% lower impulse amplitude as compared with insulated monopolar electrodes. The main advantage of the new arrangement of electrodes, however, is the dependency between **revolution** of the nerve-stimulating **needle** on its axis and the evoked muscle response. Muscle potentials measured by electromyography and respective **degrees** of **needle** torsion are shown in Fig. 3 (black circles: bipolar radially asymmetric electrode, white circles: insulated monopolar electrode). This allows localization of the nerve tissue in all three **directions** of space: Pushing forward and drawing back the electrode as well as **revolving** it on its axis lead to different **degrees** of nerve stimulation and thus facilitate faster and more exact nerve localization with less risk of tissue lesions.

18/6/2 (Item 1 from file: 5)  
07234895 BIOSIS NO.: 000090014768  
**THE RELATIONSHIP BETWEEN MULTIPLE LEADERS AND MECHANICAL AND FROST DAMAGE  
TO THE APICAL MERISTEM OF SCOTS PINE SEEDLINGS**  
1990

18/6/4 (Item 1 from file: 94)  
03773586 JICST ACCESSION NUMBER: 98A0772164 FILE SEGMENT: JICST-E  
**Development of a Rat Model of Uterine Endomyometritis and Therapeutic  
Effects of Antimicrobial Agents on the Model., 1998**

18/7,K/6 (Item 3 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.  
00153233 JICST ACCESSION NUMBER: 85A0490470 FILE SEGMENT: JICST-E  
**Blood coagulation and clotting tests in carp.**  
FUJIKATA AKIRA (1); IKEDA YAYOI (1)  
(1) Tokyo Univ. of Fisheries  
Nippon Suisan Gakkaishi, 1985, VOL.51,NO.6, PAGE.933-939, FIG.7, TBL.3,  
REF.14  
JOURNAL NUMBER: F0898AAY ISSN NO: 0021-5392 CODEN: NSUGA  
UNIVERSAL DECIMAL CLASSIFICATION: 639.21/.23  
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan  
DOCUMENT TYPE: Journal  
ARTICLE TYPE: Original paper  
MEDIA TYPE: Printed Publication  
ABSTRACT: In order to establish dependable methods for determining plasma clotting time and to investigate the blood coagulation system in fish, plasma recalcification time (PRT), prothrombin time (PT), activated partial thromboplastin time (APTT) were measured using carp *Cyprinus carpio* weighing about 350g. Experimental fish were maintained at water temperature ranging from 19 to 24.DEG.C and kept in practicable minimum of handling stress during experimental work. Blood samples were collected from the caudal vessels without anesthetization using **syringe** tipped with 20-gauge **needle** and then immediately 3.8% sodium citrate solution was added in the amount of 10% of collected blood volume to it. All surfaces of devices were exposed to the blood after siliconization. PRT and PT, indicating intrinsic and extrinsic

coagulations respectively, were minimum in incubation at 34.DEG.C. PT was more sensitive to temperature variation. These results suggest that extrinsic coagulation system in carp may contain thermolabile clotting factors. PRT and PT were minimum at 25mM concentration of CaCl<sub>2</sub> used in the measurement. PRT responded more sensitively to the variation in CaCl<sub>2</sub> concentration. PRT was prolonged with the increase of **rotation** frequency and time in centrifugation, but PT and APTT were not affected by this treatment. PRT and PT were not changeable until about 6 hours following plasma separation at 4.DEG.C. Afterward, PRT decreased significantly with the lapse of time, whereas PT increased markedly. PRT was variable by the quality of storage vial. Activity of carp tissue thromboplastin on PT was high especially in brain and heart. The high correlation was observed between activities of rabbit and carp brain thromboplastin on PT. From these results, desirable conditions are as follows; 25mM CaCl<sub>2</sub> concentration, 34.DEG.C incubation and measurement within about 6 hours following plasma separation in plastic vial at 4.DEG.C. (author abst.)



File 98:General Sci Abs/Full-Text 1984-2003/May  
File 9:Business & Industry(R) Jul/1994-2003/Jun 25  
File 16:Gale Group PROMT(R) 1990-2003/Jun 25  
File 160:Gale Group PROMT(R) 1972-1989  
File 148:Gale Group Trade & Industry DB 1976-2003/Jun 25  
File 621:Gale Group New Prod. Annou. (R) 1985-2003/Jun 24  
File 149:TGG Health&Wellness DB(SM) 1976-2003/Jun W3  
File 636:Gale Group Newsletter DB(TM) 1987-2003/Jun 24  
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Jun W4  
File 20:Dialog Global Reporter 1997-2003/Jun 26  
File 442:AMA Journals 1982-2003/Dec B2  
File 444:New England Journal of Med. 1985-2003/Jun W5

Set	Items	Description
S1	35951	SYRINGE? ?
S2	104249	NEEDLE? ?
S3	41776	BIDIRECTION? OR BI()DIRECTION?
S4	1253574	DIRECTION?
S5	1997455	DEGREE OR DEGREES OR 180
S6	643978	ROTAT???? OR TWIST???? OR PIVOT????
S7	3842271	TURN OR TURNS OR TURNED OR TURNING
S8	611587	REVLV???? OR REVOLUTION? ? OR SWIVEL????
S9	5	S1(S)S2(S)S3
S10	0	S9/2000:2003
S11	5	S9
<b>S12</b>	<b>4</b>	<b>RD (unique items)</b>
S13	0	(S1 AND S2(S)S3) NOT S9
S14	518	S1 AND S2(S)S6:S8
S15	575	S2(3N)S6:S8
S16	36	S15(S)S5
<b>S17</b>	<b>1</b>	<b>S14 AND S16</b>
S18	35	S16 NOT (S17 OR S9)
S19	23	RD (unique items)
S20	11	S19/2000:2003
S21	12	S19 NOT S20
<b>S22</b>	<b>12</b>	<b>Sort S21/ALL/PD,D</b>

12/3,AB,K/4 (Item 2 from file: 442)

DIALOG(R)File 442:AMA Journals

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00001712

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**A Remotely Programmable Insulin Delivery System; Successful Short-term Implantation in Man (ORIGINAL CONTRIBUTIONS)**

SCHADE, DAVID S.; EATON, R. PHILIP; EDWARDS, W. STERLING; DOBERNECK, RAYMOND C.; SPENCER, WILLIAM J.; CARLSON, GARY A.; BAIR, RAYMOND E.; LOVE, JERRY T.; URENDA, RUBEN S.; GAONA, JOHN I.

JAMA, The Journal of the American Medical Association

April 2, 1982; 247: 1848-18531982;

LINE COUNT: 00306

WORD COUNT: 04227

ABSTRACT: A remotely controlled, programmable insulin delivery system was implanted in a diabetic man and the feasibility of the technique was examined. Specific problems included (1) development of an appropriate surgical approach, (2) identification of methods to assess the integrity of the insulin delivery system following implantation, and (3) assessment of plasma glucose and free-insulin profiles obtained with the implanted system. The insulin pump was implanted submuscularly through a midline

abdominal incision. The Insulin reservoir was placed subcutaneously to allow percutaneous refilling. The insulin delivery catheter terminated in the peritoneal space. No postoperative wound infection occurred and rapid healing of the surgical site ensued. In vivo assessment of the system included (1) dye contrast roentgenography, (2) vasopressin stimulation, and (3) reservoir volume monitoring. Short-acting insulin was then placed in the implanted reservoir and delivered by the system for one month. Mean plasma glucose concentration declined to normal levels, as did glycosylated hemoglobin. Plasma insulin profiles were normalized with appropriate insulin peaks with each meal. We conclude that implantation of a remotely programmable insulin pump is feasible in type I diabetic man. Additional studies are necessary to define which patients will benefit from this type of insulin delivery system.

...volume determination every three days) was performed easily and provided the additional information of a **bidirectional** leak. Reservoir filling and emptying were performed by palpation of the refill septum below the abdominal skin and inserting into the reservoir a 25-gauge **needle** attached to a 3-mL **syringe**...

17/3,AB,K/1 (Item 1 from file: 149)

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

(c) 2003 The Gale Group. All rts. reserv.

01702945 SUPPLIER NUMBER: 19553059 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Intrathecal analgesia for labor.**

Wildman, Karen M.; Mohl, Virginia K.; Cassel, Jane H.; Houston, Robert E.; Allerheiligen, David A.

Journal of Family Practice, v44, n6, p535(6)

June, 1997

PUBLICATION FORMAT: Magazine/Journal ISSN: 0094-3509 LANGUAGE: English

RECORD TYPE: Fulltext TARGET AUDIENCE: Professional

WORD COUNT: 3456 LINE COUNT: 00316

... for diagnostic lumbar puncture.

4. A dilute narcotic solution is drawn up and mixed in **syringe** with filter-tip needle. Preservative-free morphine, fentanyl, and sufentanil; or combinations of the above...

...commonly used (Table

4). Combinations of narcotics may be mixed and injected in the same **syringe**.

5. Relocate the appropriate spinal interspace. Pass introducer through the skin and into the supraspinous...

...and check for return of cerebrospinal fluid.

Confirm free flow of fluid through a 360( **degrees** ) **rotation** of the **needle**

(Figure).

7. Place **syringe** with the narcotic solution onto the anesthesia needle. Aspirate slightly to confirm flow of

cerebrospinal fluid into the **syringe**. Inject solution over a 5- to 10-second period. Inject between uterine contractions. Hold the **syringe**, anesthesia needle, and introducer as a unit, and maintain contact with the patient's back...

...completion of the injection, again aspirate slightly to confirm flow of spinal fluid into the **syringe**. If aspiration is unsuccessful, injection may have occurred outside the thecal sac, which is unlikely...

...effects or side effects are observed, consider an alternative method for analgesia.

8. Remove the **syringe**, anesthesia needle, and introducer as a unit.

Reposition the patient onto her back, and place...  
... **Syringe** with filter tip needle for preparing solution for injection...

**22/8/7 (Item 7 from file: 442)**

DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.  
00098263

COPYRIGHT American Medical Association 1996

**The Saline Ballooning Method for Peritoneal Dissection During Laparoscopic  
Herniorrhaphy (ARTICLE)**

1996;

LINE COUNT: 00073

**22/8/9 (Item 9 from file: 442)**

DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.  
00055734

**A Controlled Trial of Surgery for Trachomatous Trichiasis of the Upper Lid**  
1992;

**22/8/10 (Item 10 from file: 149)**

DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

01361172 SUPPLIER NUMBER: 12296894 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Trabeculectomy without conjunctival incision.**

1992

WORD COUNT: 4039 LINE COUNT: 00330

DESCRIPTORS: Trabeculectomy--Technique; Glaucoma--Surgery

**22/8/11 (Item 11 from file: 149)**

DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

01313801 SUPPLIER NUMBER: 11666486 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Commonly used suturing techniques in skin surgery.**

1991

WORD COUNT: 2546 LINE COUNT: 00267

SPECIAL FEATURES: illustration; table; diagram

DESCRIPTORS: Suturing--Technique; Wounds and injuries--Care and treatment

**22/8/12 (Item 12 from file: 442)**

DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.  
00046002

Copyright (C) 1989 American Medical Association

**Dislocated Posterior Chamber Intraocular Lens; A New Technique of  
Management (SURGICAL TECHNIQUES)**

1989;

LINE COUNT: 00105

WORD COUNT: 01460

**22/3,AB,K/4 (Item 4 from file: 149)**

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

(c) 2003 The Gale Group. All rts. reserv.

01742169 SUPPLIER NUMBER: 20156518 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Flipping or rotating fistula needles: readers' responses.**

Dinwiddie, Lesley C.

ANNA Journal, v24, n5, p559(2)

Oct, 1997

PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 8750-0779

LANGUAGE: English RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE:

Professional

WORD COUNT: 1106 LINE COUNT: 00091



ABSTRACT: Flipping or rotating of fistula needles during cannulation does not appear to be an acceptable practice for nephrology nurses and dialysis technicians. The use of PTFE grafts has eliminated the need to flip needles. However, controlled studies are needed to determine whether one method is really better, or whether it is simply a matter of personal preference.

... controversy, referencing Brouwer's (1995) article: "With more than 15 years of dialysis experience, I **rotate** the **needles**, as I was taught to, bevel downward." When cannulating the graft or fistula, the bevel...  
...of blood. The needle is then threaded no more than 1/8th inch and rotated **180 degrees**, making the bevel face downward. This is down to prevent a "backwall" or posterior wall...

...comparing the two techniques of cannulation. Hartigan (1995) reported a third technique in which the **needle** is **rotated 180 degrees** after the needle is fully advanced. The Gore guidelines (1995) further reported the practice of cannulating bevel down but do not endorse this or the non-**rotation of needles**, citing lack of data.

Needle Flipping: A Brief History

How did needle flipping get started...

**22/3,AB,K/5 (Item 5 from file: 149)**

DIALOG(R)File 149:TGG Health&Wellness DB(SM)

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01696912 SUPPLIER NUMBER: 19430348 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Stereotactic biopsy procedures for brain tumor diagnosis. (Stereotactic Neurosurgery Update)**

Brady, Sharon; Thornhill, Annette; Colapinto, Edward

AORN Journal, v65, n5, p890(6)

May, 1997

PUBLICATION FORMAT: Magazine/Journal ISSN: 0001-2092 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional; Trade

WORD COUNT: 2457 LINE COUNT: 00245

AUTHOR ABSTRACT: Stereotactic biopsy procedures, in which a computer-based, three-dimensional-image-guided system accurately locates patients' brain tumors, are relatively new diagnostic methods. Complications from stereotactic biopsy procedures are minimal compared with open craniotomy procedures because they are performed with local anesthesia. Perioperative nurses should have knowledge of and be trained in stereotactic biopsy procedures to ensure optimal care for patients undergoing these procedures. AORN J 65 (May 1997) 890-900.

... tumor site. The biopsy needle has an inner cannula that opens a window on the **needle** when it is **turned 180 degrees**. The neurosurgeon aspirates tumor tissue through the biopsy **needle**, **turns** the inner cannula **180 degrees** to close the window, and removes the inner cannula and biopsy specimen. With the outer...

**22/3,AB,K/8 (Item 8 from file: 442)**

DIALOG(R)File 442:AMA Journals

(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

00085094

COPYRIGHT American Medical Association 1992

**Uses and Technique of Pediatric Lumbar Puncture (ARTICLE)**

WARD, EM

American Journal of Diseases of Children

October, 1992; Review: p1160

LINE COUNT: 00693

Objectives.--To review diagnostic and therapeutic indications, contraindications, complications, and technique of pediatric lumbar puncture with emphasis on diagnosis of bacterial meningitis in bacteremia, cellulitis, and fever with seizures and to discuss cerebrospinal fluid findings in partially treated infection and traumatic blood-contaminated spinal tap. Research Design.--Literature review. Conclusions.--We recommend lumbar puncture for children younger than 1 year with bacteremia, children with *Haemophilus influenzae* type B cellulitis, and children with fever and seizures not classified as simple. Pretreatment with antibiotics rarely changes cerebrospinal fluid characteristics such that a diagnosis of bacterial meningitis would be obscured. In a traumatic spinal tap, the equation to predict cerebrospinal fluid pleocytosis based on the peripheral blood cell count is invalid. When used together, cerebrospinal fluid glucose level, Gram's staining, and observed-to-expected ratio of white blood cells are highly reliable in diagnosing bacterial meningitis. (AJDC. 1992;146:)

... If no CSF is present on removal of the stylet, it should be replaced and the **needle** advanced cautiously or **rotated 90 degrees** ./74,94,96,98/ Force should never be used to overcome resistance to passage of...

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200340

File 347:JAPIO Oct 1976-2003/Feb(Updated 030603)

File 371:French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	17530	SYRINGE? ?
S2	109785	NEEDLE? ?
S3	29527	BIDIRECTION? OR BI()DIRECTION?
S4	1928838	DIRECTION?
S5	730941	DEGREE OR DEGREES OR 180
S6	1936541	ROTAT???? OR TWIST???? OR PIVOT????
S7	746752	TURN OR TURNS OR TURNED OR TURNING
S8	207476	REVOLV???? OR REVOLUTION? ? OR SWIVEL????
S9	63294	IC=A61M-005 OR IC=A61M-025 OR IC=A61M-031 OR IC=A61M-001
<b>S10</b>	<b>5</b>	<b>S1 AND S2 AND S3</b>
S11	0	S6:S8 AND S10
S12	920	S1 AND S2 AND S6:S8
S13	175	S12 AND S4:S5
S14	2835	S2(2N)S6:S8
S15	27	S13 AND S14
<b>S16</b>	<b>21</b>	<b>S9 AND S15</b>
<b>S17</b>	<b>6</b>	<b>S15 NOT S16</b>

10/7,K/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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011275284 \*\*Image available\*\*

WPI Acc No: 1997-253187/199723

**Syringe for blood collection - has mobile plate which opens/closes needle mounting part, by bidirectional sliding and is fixed by mobility stopper**

Patent Assignee: SUZUKI R (SUZU-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 9084780	A	19970331	JP 95276118	A	19950919	199723 B

Priority Applications (No Type Date): JP 95276118 A 19950919

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9084780	A		3	A61B-005/14	

Abstract (Basic): JP 9084780 A

The **syringe** (1) has a **needle** mounting part (3) installed along the axial direction of a mobile plate (2). The mobile plate is fixed by a mobility stopper (4) at the time of **needle** mounting.

The mobile part opens/closes, the **needle** mounting part by **bidirectional** sliding.

ADVANTAGE - Prevents infection. Eases disposal. Prevents incorrect pricking.

Dwg.4/4

Derwent Class: P31

International Patent Class (Main): A61B-005/14

10/7,K/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

010187906 \*\*Image available\*\*

WPI Acc No: 1995-089159/199512

**Single-use disposable syringe - has valve assembly at base of needle**

**allowing only one injection of liquid.**

Patent Assignee: HICKS C D (HICK-I)

Inventor: HICKS C D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5387195	A	19950207	US 92995684	A	19921223	199512 B

Priority Applications (No Type Date): US 92995684 A 19921223

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5387195	A		10	A61M-005/00	

Abstract (Basic): US 5387195 A

Single-use disposable **syringe** comprises a forward (15) and aft (24) barrel coupled together by a cylindrical insert (16). A plunger assembly (17) has an outer section which fits over the aft barrel and has finger holds (17A).

A plunger shaft (17B) projects from the plunger assembly into the **syringe** and has an end-cap (17C). A plunger (18) is fixed to the end-cap. The forward barrel is sealed by a second end-cap (3) through which passes a **needle** (1). A valve assembly (4) allows one time **bi-directional** flow of liquid into the aft barrel and one time partial or full discharge of fluid from it.

ADVANTAGE - The **needle** cannot be shared after injecting part of its contents.

Dwg.1/13

Derwent Class: B07; P34

International Patent Class (Main): A61M-005/00

**10/7,K/4 (Item 4 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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004647854

WPI Acc No: 1986-151197/198624

**Liq. sample processing method within a tube - by controlling fluid pump to draw sample into prepn. tube and moving sample for processing**

Patent Assignee: HEWLETT-PACKARD GMBH (HEWP ); YOKOGAWA HEWLETT PACKARD LTD (YOKH )

Inventor: APFFEL J A; JONKER R J

Number of Countries: 006 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 183950	A	19860611	EP 85113154	A	19851017	198624 B
JP 61097567	A	19860516	JP 85233110	A	19851018	198626
EP 183950	B	19900516				199020
DE 3577750	G	19900621				199026
JP 94084962	B2	19941026	JP 85233110	A	19851018	199441

Priority Applications (No Type Date): US 84662128 A 19841018

Cited Patents: 2.Jnl.Ref; DD 101014; GB 1238395; US 2797149; US 2933293; WO 8402000

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 183950	A	E	22		

Designated States (Regional): DE FR GB IT NL

EP 183950 B

Designated States (Regional): DE FR GB IT NL

JP 94084962 B2 10 G01N-030/06 Based on patent JP 61097567

Abstract (Basic): EP 183950 B

Method for automatic pretreatment of samples prior to passage of the samples through a detector, uses a **syringe** that includes a motor for electrical control of **syringe** plunger motion. The **syringe** is connected to a sample prepn. tube that includes a **needle** that has an associated motor that can raise and lower the **needle**. The **syringe** function as a **bidirectional** pump which can controllably move samples in either direction along the sample prepn. tube. An autosampler is included to electro-mechanically insert selected sample vials under the **needle**.

ADVANTAGE - Motion of th sample as a result of control of the **syringe** creates far greater flexibility than that present in an appts. that only uses the **syringe** to draw in a sample which is then switched into a continuous stream of solvent, so that the processing of the sample is dictated by the arrangement for the flow of solvent. (22pp Dwq.No.3A/3)

Abstract (Equivalent): EP 183950 B

Use of a sample injection system of an analytical instrument, for example of a liquid chromatography, for processing sample liquid to modify a physical or chemical parameter of the liquid prior to injection into the analytical instrument, wherein (a) the sample injection system comprises a tube system (120; 319, 320) and a reversible pump (112; 312) connectable to the tube system such that liquid is sucked into the tube system when the pump is operated in a first direction, with at least a portion (120; 319) of the tube system being connectable via a first port to a solvent source (11;31) and via a second port to a detector path (17,18; 37,38) of the analytical instrument such that liquid is transported from said portion (120; 319) of the tube system to the detector path by the stream of solvent delivered by the solvent source, (b) the processing of the sample liquid is performed within the tube system when the solvent source (11; 31) is disconnected from the tube system and the reversible pump (112; 312) is connected to the tube system such that control of the movement of liquids within the tube system is achieved by correspondingly operating said pump (112; 312), (c) said pump (112; 312) is used for sucking in and for moving plugs of liquid to be processed, and/or processing liquids, and/or air bubbles in the tube system, and (d) said pump (112; 312) is stopped at least once during the processing in a controlled way to stop the movement of the plug of liquid within the tube system in preparation for a following processing step to be applied to the liquid in the plug.

Derwent Class: J04; S03

International Patent Class (Main): G01N-030/06

International Patent Class (Additional): B01D-015/08; G01N-035/08

10/7,K/5 (Item 1 from file: 371)

000980669 \*\*Image present\*\*

**Titre: DISPOSITIF DE TRANSFERT BIDIRECTIONNEL D'UN LIQUIDE ENTRE UN FLACON ET UNE CAPSULE**

Deposant: SEDAT; SEDAT (No. SIREN: 955508064 428765010)

Nom et Adresse du Deposant: SOCIETE D'ETUDES ET D'APPLICATIONS

TECHNIQUES-S.E.D.A.T. (Societe anonyme) - Deposant - 135 ROUTE NEUVE  
69540 IRIGNY (FR-69540); SEDAT (Societe anonyme) - Titulaire principal  
- 135 ROUTE NEUVE 69540 IRIGNY (FR) (FR-69540)

Nom Inventeurs: ARNISSOLLE YVES - 51 RUE GUILLOUX 69230 SAINT GENIS  
LAVAL (FR-69230)



Nom Mandataire: CABINET LAVOIX  
Nature de Publication: Brevet  
Information de Brevet et Priorites (Pays, Numero, Date):  
Numero Publication: FR 2790948 - 20000922  
Numero Depot: FR 993392 - 19990318  
Priorites: FR 993392 - 19990318  
Rapport de Recherche Preliminaire (Brevet/Reference, Code de Pertinence):  
Cites dans le rapport de recherche  
CH 676548 A (Cat. A)  
US 3563373 A (Cat. A)  
US 4259956 A (Cat. A)  
US 5603695 A (Cat. A)  
US 4191225 A (Cat. A)  
US 5791466 A (Cat. A)  
US 3490437 A (Cat. A)  
Resume:  
Dispositif de transfert **bidirectionnel** d'un liquide (38) entre un  
flacon (14) muni d'un bouchon perforable (44) et une carpule (12)  
comprenant un reservoir cylindrique (26) dans lequel coulisse un piston  
perforable (34). Il comporte :- un corps (16) comportant des moyens  
d'accrochage du flacon (14), - un organe (24) de liaison du piston  
perforable (34) au corps (16), - une navette (20) par rapport au corps  
(16) et audit organe (24) de liaison, la navette (20) portant une  
aiguille creuse (22) dont une premiere extremite (112) est adaptee pour  
la perforation du piston (34) et dont la seconde extremite (114) est  
adaptee pour la perforation du bouchon (44). La navette (20) est  
deplacable entre une position initiale dans laquelle les extremités de  
l'aiguille (112, 114) sont espacees du piston perforable (34) et du  
bouchon perforable (44) et une position finale de transfert dans laquelle  
les extremités de l'aiguille (112, 114) sont recues dans la carpule (12)  
et le flacon (14).  
Classification Internationale (Principale): A61J-001/20  
Descripteurs Francais: TRANSFERT; LIQUIDE; BOUCHON; PERFORATION; AIGUILLE  
CREUSE; PISTON; FLACON; AMPOULE; SERINGUE; MELANGE  
Descripteurs Anglais: LIQUID TRANSFER; PLUG; PERFORATION; HOLLOW **NEEDLE** ;  
PISTON; FLASK; CARPULE; **SYRINGE** ; MIXING  
Forme Juridique (Type, Date de l'action, No. de BOPI, Description):  
Publication 20000922 0038 Date de publication  
Rapp de Rech 20000922 0038 Date de Rapport de Recherche  
Delivrance 20010622 0125 Date de delivrance  
Registre TO 20010817 TO - Transmission totale de propriete  
N122920  
Registre TO 20010817 TO - Transmission totale de propriete  
N122921

16/26, TI/1 (Item 1 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
015194229

WPI Acc No: 2003-254763/200325

**Safety syringe used for injection, comprises a barrel, a needle holder,  
and a plunger capable of catching and turning the needle holder**

16/26, TI/2 (Item 2 from file: 350)  
DIALOG(R) File 350: Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

015071073

WPI Acc No: 2003-131591/200313

**Hypodermic syringe comprises barrel, rotatable outer sleeve, and needle holder**

**16/26, TI/3 (Item 3 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

013605926

WPI Acc No: 2001-090134/200110

**Needle cover assembly for a hypodermic syringe comprises a rotatable collar, a frustum-shaped base, an elongated cover having halves or arms, L-shaped arms, and a hollow hub press-fitted through the hollow chamber of the base**

**16/26, TI/6 (Item 6 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

012359920

WPI Acc No: 1999-166027/199914

**Device for removing needles from hypodermic syringes - with mechanism whose disc has two opposing catches for engaging with needle and with curved walls of needle insertion opening in casing**

**16/26, TI/10 (Item 10 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

008736149

WPI Acc No: 1991-240165/199133

**Device for removing hypodermic needle from syringe - has sleeve with internal ribs to engage needle assembly on rotation**

**16/26, TI/11 (Item 11 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

008706084

WPI Acc No: 1991-210105/199129

**Hypodermic syringe - has needle holder which screws onto plunger after use and plunger rod which can be snapped across shearing line to prevent reuse**

**16/26, TI/13 (Item 13 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

008245194

WPI Acc No: 1990-132195/199017

**Appts. for unsecuring needle from syringe - has gears rotating to unscrew collar as needle is inserted**

**16/26, TI/14 (Item 14 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

007977556

WPI Acc No: 1989-242668/198934

**Syringe needle stripping device - with clamping slider in needle collecting container**

**16/26, TI/15 (Item 15 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
007827746  
WPI Acc No: 1989-092858/198912

**Used hypodermic needles container - has pivotal top access flap  
operable by handle on outer cabinet**

**16/26, TI/18 (Item 18 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
003129576  
WPI Acc No: 1981-00497D/198101

**Needle protecting sheath with abutments - forcing needle boss axially  
into syringe hub**

**16/26, TI/19 (Item 1 from file: 347)**

DIALOG(R)File 347:JAPIO  
(c) 2003 JPO & JAPIO. All rts. reserv.  
05156820  
DEVICE FOR REMOVING INJECTION NEEDLE FROM SYRINGE

**16/26, TI/20 (Item 2 from file: 347)**

DIALOG(R)File 347:JAPIO  
(c) 2003 JPO & JAPIO. All rts. reserv.  
04261601  
ASSEMBLING APPARATUS FOR INJECTION NEEDLE

**16/26, TI/21 (Item 3 from file: 347)**

DIALOG(R)File 347:JAPIO  
(c) 2003 JPO & JAPIO. All rts. reserv.  
03363374  
**SYRINGE**

**16/7, K/4 (Item 4 from file: 350)**

DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.  
013486731 \*\*Image available\*\*  
WPI Acc No: 2000-658674/200064

**Injection needle for syringe , has operation component which when  
rotated on base; retreat blocking of connector against base is released  
and needle is deeply inserted from front end of operation component**

Patent Assignee: MITSUBISHI PENCIL CO LTD (MISP )

Inventor: TAKAGI H

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2000245840	A	20000912	JP 9954868	A	19990303	200064 B
US 6217551	B1	20010417	US 2000500662	A	20000209	200123

Priority Applications (No Type Date): JP 9954868 A 19990303

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000245840	A		4	A61M-005/32	
US 6217551	B1			A61M-005/00	

Abstract (Basic): JP 2000245840 A

**NOVELTY - A spring (6) is arranged to energize a connector (8) back  
from a base (3) and clamps the connector so that the connector is**

dropped in the retreat **direction** beyond the base. When an operation component (5) provided on the base is **rotated**, a retreat blocking of connector against base is released and **needle** (4) is deeply inserted from front end of operation component.

DETAILED DESCRIPTION - An injection **needle** (2) is provided at the end of **syringe** (1). The operation component **rotates** the injection **needle** suitably. The connector is fixed to the back periphery of the **needle**. The connector is inserted into center of the base and operation component, axially.

USE - The injection **needle** is useful in a **syringe** used in medical treatment.

ADVANTAGE - The new invention prevents the **needle** accidentally sticking to person after use and thus preventing possible infection from the contaminated **needle**, as the **needle** is not exposed immediately after usage.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of **syringe**.

**Syringe** (1)  
Injection **needle** (2)  
Base (3)  
**Needle** (4)  
Operation component (5)  
Spring (6)  
Connector (8)  
pp; 4 DwgNo 1/9

Derwent Class: B07; P34

International Patent Class (Main): **A61M-005/00** ; **A61M-005/32**

**16/7,K/5 (Item 5 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

012495808 \*\*Image available\*\*

WPI Acc No: 1999-301916/199925

**Safety syringe, which eliminates risk of stick injury**

Patent Assignee: CHERN J S (CHER-I)

Inventor: CHERN J; HARN Y L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5899883	A	19990504	US 98111517	A	19980708	199925 B

Priority Applications (No Type Date): US 98111517 A 19980708

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5899883	A		10	A61M-005/00	

Abstract (Basic): US 5899883 A

NOVELTY - A plunger slides in the barrel (10) and has a rubber piston (21) at one end and a thumb plate at the other. The cylindrical connector (50) has a bottom formed with a flange, a first annular projection above the flange, and a second annular projection above the first annular projection. The **needle** (60) has a tubular pin, and a conical base at its lower end.

DETAILED DESCRIPTION - Before use, the **needle** (60) is **rotated** with respect to the connector (50) so that the semi cylindrical vertical passage (63) is aligned with the similarly shaped passage (53). The cover (16) is opened and the protuberance (161) of the cover is snugly fitted in the cavity of the barrel (10). The plunger (20) is

then pushed into the barrel so as to force the connector to engage with the neck portion and then pulled back to draw liquid medicine into the barrel through the **needle** (60). After use the **needle** is **turned** through **180 degrees** so that the passage (63) is no longer in alignment with passage (53), and then the plunger is pulled back generating vacuum inside the barrel. This draws the connector together with the **needle** into the barrel. The neck is then closed with cover (16), avoiding stick injury.

USE - For use by medical professionals to administer drugs.

ADVANTAGE - Avoids chance of accidental stick injuries. Easy to use, low cost, simple construction.

DESCRIPTION OF DRAWING(S) - The figure shows a sectional view.

barrel (10)

cover (16)

piston (21)

connector (50)

**needle** (60)

vertical semi-cylindrical passages (53,63)

protuberance (161)

pp; 10 DwgNo 6/7

Derwent Class: B07; P34

International Patent Class (Main): **A61M-005/00**

International Patent Class (Additional): **A61M-005/32**

**16/7,K/7 (Item 7 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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011187123 \*\*Image available\*\*

WPI Acc No: 1997-165048/199715

**Extendable and retractable syringe with needle - has rotating shaft holding needle carrier with tab in helical groove in sleeve of plunger engaging barrel key to prevent rotation**

Patent Assignee: VISTA MEDICAL INNOVATIONS INC (VIST-N)

Inventor: DAVIS M

Number of Countries: 072 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9706841	A1	19970227	WO 96US13166	A	19960814	199715 B
AU 9667742	A	19970312	AU 9667742	A	19960814	199727
EP 850080	A1	19980701	EP 96928168	A	19960814	199830
			WO 96US13166	A	19960814	
US 5762634	A	19980609	US 95514951	A	19950814	199830
JP 11510715	W	19990921	WO 96US13166	A	19960814	199950
			JP 97509446	A	19960814	
KR 99036445	A	19990525	WO 96US13166	A	19960814	200032
			KR 98701147	A	19980214	

Priority Applications (No Type Date): US 95514951 A 19950814

Cited Patents: US 5112315; US 5195985; US 5242419; US 5256151

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 9706841 A1 E 32 A61M-005/32

Designated States (National): AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN

Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG



Serial 09/745751

June 26, 2003

AU 9667742 A A61M-005/32 Based on patent WO 9706841  
 EP 850080 A1 E A61M-005/32 Based on patent WO 9706841  
 Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU  
 MC NL PT SE  
 US 5762634 A A61M-005/32  
 JP 11510715 W 28 A61M-005/32 Based on patent WO 9706841  
 KR 99036445 A A61M-005/32 Based on patent WO 9706841  
 Abstract (Basic): WO 9706841 A

A **syringe** with an extendable and retractable **needle** has a barrel with a key projecting inwardly to engage in a longitudinal external groove in a cam sleeve (30) of a slidable cylindrical plunger (28) with a helical groove along the sleeve inner surface and a resealable membrane (42), e.g. of butyl rubber, over the sleeve distal end. A cylindrical cam drive shaft is **rotatable** in the sleeve and has a longitudinal through cam slot. A **needle** is mounted to the distal end of a carrier movably located within the shaft and with a lateral cam tab communicating with the slot and helical groove. **Rotating** the shaft in one **direction** extends the **needle** with the **needle** penetrating the membrane, and in the other **direction** retracts the **needle**. The **needle** may have an annular rib to seal in an annular groove in the barrel distal end during use, and/or a locking tab on the **needle** may engage in a barrel notch. The slot may end in oppositely directed stop slots.

ADVANTAGE - Minimises the danger of accidental **needle** stick injury and provides smooth extension and retraction.

Dwg.1/13

Derwent Class: B07; P34

International Patent Class (Main): A61M-005/32

International Patent Class (Additional): A61M-005/178

16/7,K/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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010441493 \*\*Image available\*\*

WPI Acc No: 1995-342812/199544

**Stomatological syringe for admin. of local anaesthetics - contains cylinder with ampoule, round head with needle holder, cog-rod with lever mechanism for injection of drug in highly reliable dose**

Patent Assignee: MEDINFODENT CO LTD (MEDI-R)

Inventor: BUTUZOV V S; SHUGAILOV I A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2031664	C1	19950327	RU 9346867	A	19931014	199544 B

Priority Applications (No Type Date): RU 9346867 A 19931014

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
RU 2031664	C1		6	A61M-005/00	

Abstract (Basic): RU 2031664 C

Stomatological **syringe** for admin. of local anaesthetics, comprises: driving node (1) bayonet-connected to cylinder (2), rod (3) with cogs (4) kinematically connected to trigger (5) hinged to handle (6) in the form of a lever; fastening node (7) in the form of a sphere with slit (8) and holder (9) of **needle**; disc (10) with central opening for **direction** of **needle**; limiter (11) of reversed cog-rod motion mounted below handle and contg. nut (12) and stop with spring

(13). It can be in the form of an elastic bent ring and spring and radial console plate through a slit, with centring element at the end of the rod. The driving node can be replaced with a piston device. Ampoule contg. anaesthetic is placed inside cylinder, with plug in contact with end of cog-rod, **needle** (21) sharp at both ends, membrane (22), and element for visual control of anaesthetic. The spherical head with slit enables the **rotation** of **needle** holder up to 180deg..

USE - The **syringe** is used to inject an anaesthetic under high pressure in a highly reliable dose.

ADVANTAGE - The injection **needle** can be introduced at an angle for maximum efficiency and reliability.

Dwg.1,3,4/ 7

Derwent Class: B07; P33; P34

International Patent Class (Main): **A61M-005/00**

International Patent Class (Additional): A61G-003/00

**16/7,K/9 (Item 9 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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008859341 \*\*Image available\*\*

WPI Acc No: 1991-363365/199150

**Hypodermic syringe - has lengthwise slot in needle sheath laterally pivotal on needle hub**

Patent Assignee: PATERSON D W (PATE-I)

Inventor: PATERSON D W

Number of Countries: 016 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 460914	A	19911211	EP 91305038	A	19910604	199150 B
US 5116325	A	19920526	US 91708999	A	19910531	199224
ZA 9104295	A	19921028	ZA 914295	A	19910605	199248
EP 460914	B1	19951108	EP 91305038	A	19910604	199549
DE 69114362	E	19951214	DE 614362	A	19910604	199604
			EP 91305038	A	19910604	

Priority Applications (No Type Date): ZA 909742 A 19901204; ZA 904357 A 19900606

Cited Patents: EP 369619; US 4659330; US 4747836; US 4872552; US 4886503; WO 9001348

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 460914	A				

Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

US 5116325 A 10 A61M-005/32

ZA 9104295 A 30 A61M-000/00

EP 460914 B1 E 12 A61M-005/32

Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DE 69114362 E A61M-005/32 Based on patent EP 460914

Abstract (Basic): EP 460914 A

Hypodermic **syringe**, has lengthwise slot in a **needle** (104) protective sheath (132) laterally **pivotal** (114) upon the **needle** hub.

Pref. the sheath (132) is displaceable lengthwise before it can **pivot** past the **needle** (104) to expose it, and can be locked in **needle** sheathing position as by a slidable locking sleeve or ring, or a **needle** hub clip.

ADVANTAGE - Avoids accidental pricks by used **needle**. (12pp

Dwg.No.9/14)

Abstract (Equivalent): EP 460914 B

A **needle** assembly (100) comprising a **needle** device (102) having a **needle** base (108) and a hollow **needle** (104), having a pointed free end (106), protruding from the base, with a passageway (110) thus extending along the **needle**, and with an opening (112) to the passageway being provided in proximity to the pointed end of the **needle**; a **needle** guard comprising a hollow elongate protective sheath (120) around the **needle** and having a first open end (128) accommodating the **needle** base and a second closed end (124) in proximity to the **needle** point, an elongate slot (130) extending from the first end of the sheath to near its second end and through which the **needle** can pass, and a first pair of openings (136) in the sheath in proximity to its first end, with the openings being aligned with each other and being located on opposite sides of the slot; a pair of complementary **pivot** pins (114) protruding from the **needle** base, with each pin being **pivotal** located in one of the openings such that the sheath (120) can be **pivoted** from a primary position in which the pointed **needle** end (106) is protected by the sheath, to a secondary position in which the **needle** point is exposed for use characterised in that it includes a pair of secondary openings (134) in the sheath (120), spaced longitudinally from the first pair of openings (136) and also being capable of accommodating the **pivot** pins (114) in **pivotal** fashion, with each secondary opening being connected to its associated first opening by means of a first passageway (140) along which the **pivot** pin can pass and with the secondary openings being spaced further from the first end (128) of the sheath than the first pair of openings so that the sheath is displaceable in a longitudinal **direction** with respect to the **needle** (104) from the position in which the **pivot** pins are located in the first pair of openings (136) and in which the **needle** point (106) is aligned with the slot to permit **pivoting** of the sheath from its primary to its secondary position, to a second position in which the **pivot** pins are located in the secondary openings (134) and in which the **needle** point is held captive by a portion of the sheath between the distal end of the slot in the sheath and the second end (124) of the sheath.

(Dwg.1/5

Abstract (Equivalent): US 5116325 A

**Needle** assembly comprises a **needle** device having a base and a hollow **needle**, an opening to the **needle** passageway near the sharpened end, and a **needle** guard in the form of a sheath provided around the base.

An elongate opening extends along the sheath and through which the **needle** can pass. Cooperating hinge components are disposed on the sheath and base to allow the sheath to **pivot** between **needle** guard and **needle** exposing positions.

Derwent Class: B07; P34

International Patent Class (Main): A61M-005/32

16/7,K/12 (Item 12 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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008636088 \*\*Image available\*\*

WPI Acc No: 1991-140118/199119

**Injection needle protector pivoted to syringe barrel - has slots along opposite sides to pivot away in either direction**

Patent Assignee: OLSON R A (OLSO-I)  
Inventor: OLSON R A  
Number of Countries: 001 Number of Patents: 001  
Patent Family:  
Patent No Kind Date Applicat No Kind Date Week  
US 5011475 A 19910430 US 89360770 A 19890602 199119 B  
Priority Applications (No Type Date): US 89360770 A 19890602  
Abstract (Basic): US 5011475 A

A protector comprises a **needle** (27) attached to a mounting hub which carries a protective sheath (25) normally surrounding the entire **needle** and having longitudinal openings along both sides to allow the **needle** to be inserted into one of two conduits of an i.v. tube assembly emplaced in a blood vessel.

The sheath (26a) can be **pivotally** retracted from the **needle** on either side to expose it for use and allow it to be moved back into the covering position. A pair of engageable positioning stops (25b, 26b) is mounted on the hub and sheath to position the sheath in the protective position when the stops are engaged.

ADVANTAGE - Provides improved protection against accidental **needle** sticks.

Dwg. 6/9

Derwent Class: B07; P34

International Patent Class (Additional): **A61M-005/32**

**16/7,K/16 (Item 16 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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007653945

WPI Acc No: 1988-287877/198841

**Single-use medical syringe - has longitudinal plunger splines cooperating with ratchet pawls in barrel end plate**

Patent Assignee: BEV-CAP PLASTICS PT (BEVC-N)

Inventor: BANKS G H

Number of Countries: 002 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2203047	A	19881012	GB 884546	A	19880226	198841 B
US 4840616	A	19890620	US 88161574	A	19880229	198931
GB 2203047	B	19910130				199105
US 33821	E	19920211	US 91652703	A	19910208	199209 N

Priority Applications (No Type Date): AU 87580 A 19870227; US 91652703 A 19910208; US 88161574 A 19880229

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2203047	A		13		
US 4840616	A		5		

Abstract (Basic): GB 2203047 A

A **syringe** has a plunger passing through an end plate and with a head sealing on the internal surface of the barrel. The plunger shaft has at least two longitudinal splines with teeth coacting with respective pawls and with circumadjacent and corresponding recesses. The plate has a plunger locating aperture with three or more channels each to receive one spline and two having the pawls.

The recess allow free **rotation** of the plunger within the plate aperture. One pawl allows plunger withdrawal only, plunger **rotation** then engaging the second pawl which allows plunger insertion only.

There are pref. four channels and four splines, only two having teeth and spaced mutually by **180** deg.. At least one of the remaining splines has detents to permit a once-only 90 deg. free **rotation**.

ADVANTAGE - Reliably prevents re-use to minimise the danger of disease transmission.

0/6

Abstract (Equivalent): GB 2203047 B

A single use disposable medical **syringe** comprising a **syringe** body adapted at one end to receive a hypodermic **needle**, a plunger located within said **syringe** body and passing through an end plate attached to other end of said **syringe** body and characterised in that: said plunger includes a plunger head forming at any time a seal with an interior surface of said **syringe** body, and a plunger shaft including at least first and least first and second longitudinally extending splines, said first spline including teeth adapted to co-act with a first pawl, and said second spline including teeth adapted to co-act with a second pawl, said splines further including circumjacent and corresponding first and second recesses; said end plate having an aperture to locate said plunger shaft, said aperture having three or more channels each adapted to receive one or other said splines and two of said channels being provided respectively with said first and second pawl; said recesses allowing limited **rotation** of said plunger within said end plate aperture such that said first pawl allows withdrawal only of said plunger whereupon said limited **rotation** of said plunger engages said second pawl which allows insertion only of said plunger.

Abstract (Equivalent): US 4840616 A

A single-use medical **syringe** comprises a barrel to receive a **needle** at one end and holding a plunger passing through an end plate at the other barrel end. The plunger has a head sealing against the barrel interior, and a shaft with two or more longitudinal splines each with teeth to cooperate with respective pawls and with circumadjacent corresponding recesses. The plate has an aperture to locate the shaft, with three or more channels to receive the splines, two channels having the respective pawls. The recesses allow plunger free **rotation** when within the plate aperture. One pawl allows withdrawal only of the plunger, and the second allows only insertion. There are pref four splines, two having teeth and at least one other with a detent to allow once-only **rotation**. The **needle** is pref permanently fixed to the **syringe**. ADVANTAGE - Discourages re-use of **needles**.

(5pp

Derwent Class: B07; P34

International Patent Class (Additional): **A61M-005/31**

**16/7,K/17 (Item 17 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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004838067

WPI Acc No: 1986-341408/198652

**Medical syringe for injection into bone - has rotating needle and sliding piston driven by battery operated motors**

Patent Assignee: VILLETTE A (VILL-I)

Inventor: VILLETTE A

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2581548	A	19861114	FR 857003	A	19850509	198652 B



US 4787893 A 19881129 US 86878134 A 19860625 198850  
Priority Applications (No Type Date): FR 857003 A 19850509; US 86878134 A  
19860625

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2581548	A		15		

Abstract (Basic): FR 2581548 A

The injector has a pistol grip shape, with the back of the grip (10) curved inwards to receive the palm of the operators hand. A main switch (36) is mounted on this curved surface. The front surface has two switches (2,3) controlling operation of two micromotors (4,5) which **rotate** the injector cartridge (13) and operate the injection. The motors are controlled via an electronic circuit (6), from rechargeable batteries (7) providing 8 volts.

The first motor (4) drives a pinion (8) which engages a toothed wheel (9) surrounding the **rotating** injector body. The second drives a pinion which engages a toothed rack on a piston (17) which moves in a cylinder to provide the injection.

USE - Injection of anaesthetic or other biocompatible material into bone - especially for use by dentists

Abstract (Equivalent): US 4787893 A

A biocompatible liquid or semi-liquid formulation is injected through bone tissue. The device has a **needle** (16) removably mounted at the end of a carpule (13). The carpule has a moving base wall (4,8,9,12) for **rotating** the carpule and the **needle** and a motor (5) for applying a force to the moving base wall of the carpule.

The motor applies the force to the moving base wall via a rack (17) which bears against the moving base wall of the carpule. Switches are also included for reversing the **direction** of the power supply to a second motor. (8pp)

Derwent Class: P32; P34; S05

International Patent Class (Additional): A61C-019/08; **A61M-005/24**

**17/7,K/2 (Item 2 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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009411403 \*\*Image available\*\*

WPI Acc No: 1993-104914/199313

**Biochemical analysis device to obtain biochemical material concn. in blood, etc. - has dropping unit with tip portion syringe needle shape and turning drive unit to rotate dropping unit while soln. is dropped on reagent layer**

Patent Assignee: FUJI PHOTO FILM CO LTD (FUJF )

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 5045353	A	19930223	JP 91204200	A	19910814	199313 B

Priority Applications (No Type Date): JP 91204200 A 19910814

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 5045353	A		7	G01N-033/48	

Abstract (Basic): JP 5045353 A

In a biochemical analysis device in which a sample soln. is supplied by a dropping unit onto a biochemical analysis element consisting of a support, layers laminated on the support and at least, a reagent layer, and a film-like covering member to cover the layers so that a space is formed above the centre of the layers, the dropping

unit has a tip portion of **syringe needle** shape. A **turning** drive is provided to **turn** the dropping unit about its cylinder body while the sample soln. is dropped onto the reagent layer.

The biochemical analysis element should be kept dry before use. The film-like covering member prevents external moisture from entering the reagent layer. The tip of the dropping unit is cut off obliquely like **syringe needle** to pierce the covering member.

USE/ADVANTAGE - Used to obtain the concn. of a specific biochemical substance included in sample solns. such as blood, urine, etc. by measuring the optical density of the reagent layer caused by chemical reactions. When the dropping tip is pierced into the covering member and discharges sample soln. from the tip, because of the shape of the tip, much sample soln. is supplied in one **direction** only, and the sample soln. can not be supplied uniformly. With this device, when dropping the sample soln., the **needle** -like dropping unit is **turned** about the axis of its cylinder body. Thereby, the sample discharging **direction** changes with time, and the sample soln. is dropped uniformly on the reagent layer.

Dwg.1/7

Derwent Class: B04; J04; S03

International Patent Class (Main): G01N-033/48

International Patent Class (Additional): G01N-033/52

17/7,K/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007187871

WPI Acc No: 1987-184880/198726

**Twin cutter surgical instrument - has independent blades at ends of coaxial hypodermic needle**

Patent Assignee: BAUM G (BAUM-I)

Inventor: BAUM G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4672965	A	19870616	US 84641376	A	19840816	198726 B

Priority Applications (No Type Date): US 84641376 A 19840816

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4672965	A		6		

Abstract (Basic): US 4672965 A

The instrument similar in size and use to a cystotome, combines into a single instrument two knives which can be independently used so that the cutting surfaces of the knives can cut, at right angles to the surface to be incised, in either of two **directions**, one **direction** being at an angle with respect to the other **direction**. The knives are located at the ends of coaxially disposed elongate members formed from hypodermic **needles**.

A first of the knives is guarded by the other knife until relative **rotation** of the **needles** brings the second knife into use. The inner one of the **needles** is connected to a hypodermic **needle** hub which in **turn** is connected to a hypodermic **syringe**, thus allowing fluids to be injected into or withdrawn from the surgical site.

ADVANTAGE - Increased safety. 1/5

Derwent Class: P31

International Patent Class (Additional): A61B-017/22

File 348:EUROPEAN PATENTS 1978-2003/Jun W03

File 349:PCT FULLTEXT 1979-2002/UB=20030619,UT=20030612

Set	Items	Description
S1	40392	SYRINGE? ?
S2	64254	NEEDLE? ?
S3	36108	BIDIRECTION? OR BI()DIRECTION?
S4	629371	DIRECTION?
S5	757135	DEGREE OR DEGREES OR 180
S6	509449	ROTAT???? OR TWIST???? OR PIVOT????
S7	459914	TURN OR TURNS OR TURNED OR TURNING
S8	72518	REVOLV???? OR REVOLUTION? ? OR SWIVEL????
S9	18894	IC=A61M-001 OR IC=A61M-005 OR IC=A61M-025 OR IC=A61M-031
S10	22	S2(5N)S3
S11	3	S1 AND S10
S12	8	S6:S8(S)S10
S13	0	S5(S)S12
S14	7	S12 NOT S11 [not relevant]
S15	11051	S2(S)S6:S8
S16	1645	S5(S)S15
S17	188	S1(S)S16
S18	71	S9 AND S17
S19	2033	S2(2N)S6:S8
S20	234	S19(5N)S3:S5
S21	16	S1(S)S20

11/3,AB,K/3 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00559606

**A DISPOSABLE MEDICAL COLLECTION TUBE HOLDER WITH RETRACTABLE NEEDLE**

**DISPOSITIF DE RETENUE JETABLE POUR EPROUVETTE DE PRELEVEMENT MEDICAL, DOTE  
D'UNE AIGUILLE RETRACTABLE**

Patent Applicant/Assignee:

TEXAS APPLIED BIOMEDICAL SERVICES INC,  
TRIPP Martha J,  
JANECKA Joseph J Jr,

Inventor(s):

TRIPP Martha J,  
JANECKA Joseph J Jr,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200022979 A1 20000427 (WO 0022979)

Application: WO 99US21620 19991013 (PCT/WO US9921620)

Priority Application: US 98175484 19981020

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE

ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT

LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT

UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ

MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ

CF CG CI CM GA GN GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 4318

English Abstract

A disposable medical collection tube holder (8) assembly with retractable needle (48) is disclosed. The spent needle, or other similar medical device, affixed to the holder may be safely encapsulated, and disposed by a simple, one handed operation. Both the needle (48), and the

holder (8) are rendered useless for any subsequent operation. The invention is comprised of two parts, a collection tube holder (8), and an evacuated accessory (18) fitted with air release/vacuum seal mechanism (66) that readily permits the introduction of the vacuum into the hollow chamber of the accessory (18). When using the collection tube holder (8) in the standard manner, and after the collection of the blood or other bodily fluids is complete, the collection test tube is withdrawn from the holder (8), and then the needle (48) withdrawn from the vein. The accessory (18), a tubular member with an evacuated interior, is inserted into the collection tube holder fully (8), and longitudinally axial force is applied to the proximal (thumb) end of the evacuated accessory (18).

Fulltext Availability:

Detailed Description

Detailed Description

... the use of a removable cap for the purposes of enclosing and protecting a sterilized **syringe** in a transport. Solutions that attempt to better protect the health care worker include that disclosed in U.S. Pat. No. 4,790,822. The '822 patent discloses a disposable **syringe** in which the needle can be first captured by the plunger and then withdrawn into...

...barrel...  
U.S. Pat. No. 4,425,120 discloses a needle guard movable on the **syringe** barrel between an extended position in which the needle guard shields the needle and a...

...the needle is exposed for use.  
U.S. Pat. No. 4,816,022 discloses a **syringe** with a sliding cap for preventing accidental puncture. The '022 patent utilizes a nub and backseat for engagement of a nose-piece for securing the cap around the **syringe** for safety purposes. U.S. Pat. No. 4,840,619 discloses a **syringe** assembly that has a transport held in telescoping position over a **syringe** by flanges. Other and various means of sheathing or shielding a **syringe** are shown in the following U.S. Pat. Nos.: 4,738,663; 4,723,943...

...895,633; 311070785.  
U.S. Pat. No. 4,826,483 discloses a non-reusable **syringe** with one-way movable position.  
U.S. Pat. Numbers 5,000,736 and 5,125,898 to Kaufhold et al show disposable **syringes** with automatic needle retraction. The Kaufhold patents allow the used needle or other medical sharps device to be encapsulated within an evacuated plunger of the **syringe** and be rendered safe for handling immediately after use and throughout subsequent disposal procedures, as well as rendering the **syringe** unsuitable for further use. The Kaufhold patents do not address the safety issues associated with...that surrounds a detachable needle port hub; the needle port hub in turn accepts a **bi - directional needle**, or other similar medical sharps device, used in the collection of blood or other body...

...needle, the hub release ring will advance into this annular channel. During typical use, the **bi - directional needle** assembly is secured within the opening of the needle port hub, one needle end is...orifice 44 of detachable needle port hub 14 in turn receives a standard threaded male **needle** holder 46 with **bi - directional needle** 48, with exterior **needle** 50 and interior needle 52, of a configuration well known to those of ordinary skill...

Syringe and assembly method of the same

21/6/2 (Item 2 from file: 348)  
00660120

Syringe assembly

21/6/3 (Item 3 from file: 348)  
00603306

Syringe having needle isolation features

21/6/4 (Item 4 from file: 348)  
00533390

Device for the removal and replacement of a needle shield

21/6/5 (Item 5 from file: 348)  
00343584

Collapsible needle cover.

21/6/8 (Item 1 from file: 349)  
00960551 \*\*Image available\*\*

NEEDLE SHIELD ASSEMBLY HAVING HINGED NEEDLE SHIELD

21/6/16 (Item 9 from file: 349)  
00149240

CONTAINMENT DEVICE FOR SAFELY REMOVING, STORING AND ULTIMATELY DISPOSING OF  
NEEDLES FROM HYPODERMIC NEEDLE/SYRINGE ASSEMBLIES

Publication Year: 1988

16/3,AB,K/9 (Item 9 from file: 348) *too recent*  
DIALOG(R)File 348:EUROPEAN PATENTS  
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01563958

Apparatus and method for removing a needle from a syringe  
Gerat und Methode zur Entfernung einer Nadel von einer Spritze  
Appareil et methode pour detacher une aiguille d'une seringue  
PATENT ASSIGNEE:

Q Care International, LLC, (2351450), 680 Atlanta Country Club Drive,  
Marietta, GA 30067, (US), (Applicant designated States: all)

INVENTOR:

Butler, William F., 680 Country Club Drive, Marietta, Georgia 30067, (US)

LEGAL REPRESENTATIVE:

Wright, Howard Hugh Burnby et al (83911), Withers & Rogers, Goldings  
House, 2 Hays Lane, London SE1 2HW, (GB)

PATENT (CC, No, Kind, Date): EP 1300170 A2 030409 (Basic)  
EP 1300170 A3 030521

APPLICATION (CC, No, Date): EP 2002256917 021004;

PRIORITY (CC, No, Date): US 971302 011004

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;  
IE; IT; LI; LU; MC; NL; PT; SE; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A61M-005/32

ABSTRACT EP 1300170 A2

A method and apparatus for removing the needle portion of a hypodermic syringe and simultaneously sterilizing and destroying the needle portion of a hypodermic syringe, thereby eliminating the risk of infection by microorganisms that may be present in or on the needle. When a syringe is



inserted into the apparatus, the needle is heated to a temperature sufficient to melt or at least soften the needle, and sufficient to inactivate any virus, bacteria, yeast, or other microorganism remaining on or within the needle. The needle also is cut at the location of melting so that the needle is removed from the remaining portion of the syringe. The heating and cutting elements are part of a disposable cartridge, which also contains the cut-off needle portions.

ABSTRACT WORD COUNT: 125

NOTE: Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	200315	1865
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SPEC A	(English)	200315	3849
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Total word count - document A	5714
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Total word count - document B	0
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Total word count - documents A + B	5714
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...SPECIFICATION 162 and 164 of the first and second contact blades 142 and 144.

With the **needle** remaining fully inserted, the syringe is pushed down against the dish 136 in order to depress the **needle** removal unit 114 into the cut-off position. The introduction of downward force exerted on the **needle** removal unit 114 overcomes the resistance force of the compression spring 140, so that the **needle** removal unit moves downwardly within the collar 113 and housing 111. As the **needle** removal unit moves downwardly, the yoke key 158 **pivots** the yokes 146 and 148 on the axles 150 and 152, causing the inner edges 162 and 164 of the contact blades to engage opposite sides of the **needle** 182 immediately below the fire-resistant layer 180 beneath the bottom of the dish 136.

The axle 152 of the yoke 148 is...the yoke key 158 in the embodiment described above.

When a hypodermic syringe is inserted **needle** -first into the dish 136 in the embodiment shown in Figs. 7 and 8, the **needle** penetrates the layer of material 180 to extend beyond and alongside the sharpened inner edge 216 of the fixed contact blade 214. With the **needle** remaining fully inserted, downward force is applied to the syringe to move the **needle** cutting assembly 210 downwardly into the cut-off position in opposition to the resistance force of the compression spring 140, mentioned above. As the **needle** cutting assembly 210 moves downwardly, the finger 248 contacts a fixed element of the housing, **pivoting** the yoke 224 on the axle 226 and causing the sharpened inner edge 220 of the second contact blade 212 to engage the **needle** and displace the **needle** into contact with the sharpened inner edge 216 of the fixed contact blade 214...

16/3,AB,K/11 (Item 11 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01543189

**A non-dosing cartridge for an injection device**

**Kartusche ohne Dosierungseinrichtung fur eine Injektionsvorrichtung**

**Cartouche sans moyens de dosage pour un dispositif d'injection**

PATENT ASSIGNEE:

Becton Dickinson France S.A., (1698561), 11, Rue Aristide Berges, B.P. 4,  
38800 Le Pont-de-Claix, (FR), (Applicant designated States: all)

INVENTOR:

Olive, Eric, 24 Avenue du Chateau, F-69003 Lyon, (FR)  
Sams, Bernard, 22 Avondale Avenue, London N12 8EJ, (GB)

LEGAL REPRESENTATIVE:

Gerbino, Angelo et al (70581), Jacobacci & Partners S.p.A. Corso Regio  
Parco, 27, 10152 Torino, (IT)

PATENT (CC, No, Kind, Date): EP 1285674 A1 030226 (Basic)

APPLICATION (CC, No, Date): EP 2002025483 970819;

PRIORITY (CC, No, Date): US 701962 960823

DESIGNATED STATES: BE; CH; DE; ES; FR; GB; IT; LI; NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 824923 (EP 97114272)

INTERNATIONAL PATENT CLASS: A61M-005/20; A61M-005/32

ABSTRACT EP 1285674 A1

A device for automatically injecting a material into the body is disclosed. The device includes a drive assembly and a disposable assembly including a syringe (30, 32) which is mounted to the drive assembly. The drive assembly includes a drive rod (46), a driver releasably coupled to the drive rod, and a spring (56) which urges the drive rod towards the syringe assembly. The spring (56) first urges the coupled drive rod and driver along the axis of the device, causing the skin to be penetrated by the needle (38) of the syringe assembly. The drive rod is then decoupled from the driver. The spring continues to urge the drive rod in the axial direction, whereby the drive rod engages a piston in the syringe assembly and causes the displacement of the material therein. A cap (16) is removably mounted to the disposable assembly. Locking members on the cap (16) and disposable assembly prevent removal of the cap until the disposable assembly is moved to the firing position within the drive assembly. A lock release assembly including cooperating elements on the drive assembly and disposable assembly caused disengagement of the locking members upon rotation of the disposable assembly with respect to the drive assembly.

ABSTRACT WORD COUNT: 205

NOTE: Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200309	430
SPEC A	(English)	200309	5070
Total word count - document A			5500
Total word count - document B			0
Total word count - documents A + B			5500

...SPECIFICATION of the disposable portion of the device once fully inserted.

The disposable portion can be **rotated** about an arc of forty **degrees** once it is pushed as far back as possible. Because the driver is pushed back...the length of the plug 24. If the piston 32 is located closer to the **needle** end of the cartridge, the nose portion of the plug will be longer such that it adjoins, but does not contact, the piston. As discussed above, **rotation** of the sleeve with respect to the collar also causes the inward displacement of the...

...thereby allowing the cap to be removed from the sleeve. The pawl 14G is simultaneously **rotated** out of engagement with the notch 28B in the sleeve rib, which allows the sleeve...

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01541559

Apparatus for marking tissue

Gerat zur Markierung von Gewebe

Appareil de marquage de tissus

PATENT ASSIGNEE:

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(US), (Applicant designated States: all)

INVENTOR:.

Ritchart, Mark A., 41045 Willowbend Drive, Murrieta, CA 92563, (US)

Reu, Eugene B., 28096 Tamarind, Mission Viejo, CA 92692, (US)

Cole, Mark, 10972 Furling Drive, Santa Ana, CA 92705, (US)

Foerster, Seth A., 758 Via Otono, San Clemente, CA 92672, (US)

Wardle, John L., 1603 Via Ameno, San Clemente, CA 92672, (US)

LEGAL REPRESENTATIVE:

Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43,  
Bloomsbury Square, London WC1A 2RA, (GB)

PATENT (CC, No, Kind, Date): EP 1284123 A1 030219 (Basic)

APPLICATION (CC, No, Date): EP 2002079867 970731;

PRIORITY (CC, No, Date): US 23883 P 960812

DESIGNATED STATES: DE; ES; FR; GB; IT

RELATED PARENT NUMBER(S) - PN (AN):

EP 873091 (EP 97936328)

INTERNATIONAL PATENT CLASS: A61B-019/00

ABSTRACT EP 1284123 A1

An implantable marking device is provided which is designed to percutaneously deliver permanent markers to desired tissue locations within a patient's body, even if the desired locations are laterally disposed relative to the distal end of the delivery device, as is the case for conduit or cavity walls. This provides several advantages to the physician in diagnosis and management of tissue abnormalities, such as a means of localization of a tissue abnormality for follow-up surgical treatment, and a means of tissue abnormality site identification for purposes of ongoing diagnostic follow-up. In one preferred construction, a radiographic clip is configured in the form of a surgical staple. A disposable tissue marker applier, which comprises a flexible tube, pull wire, and squeeze handle, is employed to advance and deploy the clip to a desired tissue location. Either a flexible or a rigid introducer is also provided for providing access to the site to be marked.

ABSTRACT WORD COUNT: 154

NOTE: Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200308	414
SPEC A	(English)	200308	4510
Total word count - document A			4924
Total word count - document B			0
Total word count - documents A + B			4924

...SPECIFICATION many markers as desired may be implanted, following which the hub 40 may be counter- **rotated** 90-270 **degrees** and the entire probe 34 withdrawn from the patient. If it is desired to mark various locations about the cavity wall 14, the probe **needle** 22 may be **rotated** between marker implantations to change the orientation of the tissue receiving port 28, using the...

16/3,AB,K/13 (Item 13 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01538382

A five beveled point geometry for a hypodermic needle

Funfflachige Punktgeometrie fur eine Nadel zur Subkutaninjektion

Geometrie de pointe a cinq facettes pour une aiguille hypodermique

PATENT ASSIGNEE:

Becton Dickinson and Company, (208883), One Becton Drive, Franklin Lakes,  
New Jersey 07417-1880, (US), (Applicant designated States: all)

INVENTOR:

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Koziol, Steven L., 140 Lakeshore Drive, Columbus, Nebraska 68601, (US)

LEGAL REPRESENTATIVE:

Gerbino, Angelo et al (70581), Jacobacci & Partners S.p.A. Corso Regio  
Parco, 27, 10152 Torino, (IT)

PATENT (CC, No, Kind, Date): EP 1281411 A1 030205 (Basic)

APPLICATION (CC, No, Date): EP 2002025231 970619;

PRIORITY (CC, No, Date): US 670255 960620

DESIGNATED STATES: DE; ES; FR; GB; IT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 819442 (EP 97110016)

INTERNATIONAL PATENT CLASS: A61M-005/32; B24B-019/16

ABSTRACT EP 1281411 A1

A hypodermic needle (10) featuring a multi-beveled point (20) geometry is disclosed. In one embodiment, the multi-beveled point (20) features a primary bevel (30), a pair of tip bevels (34a, 34b), and a pair of middle bevels (32a, 32b), each intermediate the primary bevel (30) and a respective one of the tip bevels. The primary (30) and middle bevels (32a, 32b) are provided at angles of inclination, measured between the central axis and a reference plane that are substantially identical. The tip bevel (34a, 34b) are formed at an angle of inclination respective to the central axis which is not equal to the angle of inclination at which the primary (30) and middle (32a, 32b) bevels are formed. The resulting five-beveled point geometry contributes to a more continuous bevel face free of abrupt intercepts or transitions between the respective bevel faces, lessening the penetration force required to urge the needle point through skin, flesh, or other material.

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...SPECIFICATION OMEGA) and 32(OMEGA), respective to imaginary plane 50, in a range of about 9 **degrees** ("( **degree** )") plus or minus 1( **degree** ). For purposes of simplicity, the transition demarcating primary bevel 30 from each of middle bevels...

...smoother, more continuous bevel face 40. Subsequent to formation of primary bevel 30, the hypodermic **needle** is **rotated** about the central axis 18 in both the clockwise and counterclockwise directions at **rotational** angle 32(lambda) to form middle bevels 32a, 32b. It has been

found by the applicants herein that optimum results are obtained when the range of **rotational** angle 32( $\lambda$ ) is about 23( **degree** ) plus or minus 5( **degree** ).

Tip bevels 34a, 34b are likewise formed or otherwise provided on hypodermic **needle** 10 by inclining central axis 18 of hypodermic **needle** 10 to an angle 34(OMEGA) relative to reference plane 50, and by **rotating** the hypodermic **needle** about central axis 18 to an angle 34( $\lambda$ ). It has been found by the...

...the height of intercepts 38a, 38b demarcating the respective middle and tip bevels results when **needle** cannula 10 is inclined at an angle 34(OMEGA) in a range of about 15( **degree** ) plus or minus 2( **degree** ), and when the **needle** cannula is **rotated** to an angle 34( $\lambda$ ) in a range measuring about 23( **degree** ) plus or minus 5( **degree** ).

Figure 3 exemplifies the side profile of multi-beveled needle tip 20 formed in accordance in the formation of consistently good **needle** points 20. **Needle** point 20 was produced on a 27 gauge **needle** by grinding. Central axis 18 of hypodermic **needle** 10 was inclined at an angle of about 14.5 **degrees** respective of the grinding wheel for an initial "hog-off" grind. Thereafter, central axis 18 of the hypodermic **needle** was subjected to a series of angles of inclination and **rotation** in order to form a pair of adjacent middle and tip bevels prior to formation...

...the inventors herein, subsequent to the hog-off grind, central axis 18 of the hypodermic **needle** was inclined with angle 32(OMEGA) of about 9 **degrees** , and thereafter **rotated** right around central axis 18 to an angle 32( $\lambda$ ) of about 20 **degrees** . At this point, left-side middle bevel 32a was ground. Thereafter, maintaining the **rotational** position 32( $\lambda$ ) of the central axis, central axis 18 was inclined to an angle 34(OMEGA) of about 14.5 **degrees** and left-side tip bevel 34a was ground (note that angle of **rotation** 34( $\lambda$ ) is the same 20 **degree** angle established for angle of **rotation** 32( $\lambda$ )). After the left side middle and tip bevels were ground, central axis 18 of the **needle** cannula was repositioned to the angle of inclination 32(OMEGA) of about 9 **degrees** , and **rotated** 40 **degrees** to the left of the position where the left side middle and tip bevels had...

...this point, right middle bevel 32b was ground. Thereafter, maintaining central axis 18 of the **needle** in its **rotational** position, the central axis was inclined to an angle of inclination 34(OMEGA) of about 14.5 **degrees** and tip bevel 34b was ground. Thereafter, central axis 18 of the **needle** cannula was **rotated** 20 **degrees** back to its center position, the central axis 18 positioned at an angle of inclination 30(OMEGA) of about 9 **degrees** , and primary bevel 30 was ground...



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**A HAND-PIECE FOR INJECTION DEVICE WITH A RETRACTABLE AND ROTATING NEEDLE**  
**PIECE A MAIN POUR DISPOSITIF D'INJECTION AVEC AIGUILLE RETRACTABLE ET**  
**ROTATIVE**

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English Abstract

An injection device is arranged, and constructed to simultaneously rotate a needle (22) during its forward translation as a therapeutic agent such as a liquid is ejected therefrom. In one embodiment the injection device is an automatic device including a pump (12) forcing the liquid through a tube (18) to a hand-piece (20), a second position in which the needle (22) extends outwardly of the hand-piece (20) so that it can be used to eject the liquid, with the needle (22) being automatically uni-directionally or bi-directionally rotated as it is advanced between the first, and second positions. In an alternate position a syringe (100) is provided with a barrel (102), a plunger (112) extending into the barrel (102) by the operator. The needle (22), and plunger (112) are arranged so that as the plunger (112) enters the barrel (102) forcing the liquid to be expelled, the needle (22) automatically rotates about its axis at the same time.